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Sequence Listing was accepted with existing errors.

See attached Validation Report.

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Reviewer: Anne Corrigan

Timestamp: Fri Aug 03 18:26:00 EDT 2007

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Application No: 10669757 Version No: 2.1

Input Set:

Output Set:

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Finished: 2007-08-03 18:25:19.860  
Elapsed: 0 hr(s) 0 min(s) 0 sec(s) 130 ms  
Total Warnings: 0  
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No. of SeqIDs Defined: 24  
Actual SeqID Count: 24

# SEQUENCE LISTING

<110> Klotz, Alan  
Brown, Kimberly  
Zaretsky, Elizabeth

<120> Microbial Trypsin Mutants Having Chymotrypsin Activity And  
Nucleic Acids Encoding Same

<130> 10211.200-US

<140> US 10/669,757

<141> 2003-09-24

<150> 60/413,057

<151> 2002-09-24

<160> 24

<170> PatentIn version 3.4

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<212> DNA

<213> Fusarium oxysporum

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<213> Fusarium oxysporum

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20 25 30

Ala Gly Asp Phe Pro Phe Ile Val Ser Ile Ser Arg Asn Gly Gly Pro  
35 40 45

Trp Cys Gly Gly Ser Leu Leu Asn Ala Asn Thr Val Leu Thr Ala Ala  
50 55 60

His Cys Val Ser Gly Tyr Ala Gln Ser Gly Phe Gln Ile Arg Ala Gly  
65 70 75 80

Ser Leu Ser Arg Thr Ser Gly Gly Ile Thr Ser Ser Leu Ser Ser Val  
85 90 95

Arg Val His Pro Ser Tyr Ser Gly Asn Asn Asn Asp Leu Ala Ile Leu  
100 105 110

Lys Leu Ser Thr Ser Ile Pro Ser Gly Gly Asn Ile Gly Tyr Ala Arg  
115 120 125

Leu Ala Ala Ser Gly Ser Asp Pro Val Ala Gly Ser Ser Ala Thr Val  
130 135 140

Ala Gly Trp Gly Ala Thr Ser Glu Gly Gly Ser Ser Thr Pro Val Asn  
145 150 155 160

Leu Leu Lys Val Thr Val Pro Ile Val Ser Arg Ala Thr Cys Arg Ala  
165 170 175

Gln Tyr Gly Thr Ser Ala Ile Thr Asn Gln Met Phe Cys Ala Gly Val

180

185

190

Ser Ser Gly Gly Lys Asp Ser Cys Gln Gly Asp Ser Gly Gly Pro Ile  
 195 200 205

Val Asp Ser Ser Asn Thr Leu Ile Gly Ala Val Ser Trp Gly Asn Gly  
 210 215 220

Cys Ala Arg Pro Asn Tyr Ser Gly Val Tyr Ala Ser Val Gly Ala Leu  
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Arg Ser Phe Ile Asp Thr Tyr Ala  
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actgctgccc actgcgtttc cggatacgct cagagcgggt tccagattcg tgctggcagt	300
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20 25 30

Ala Gly Asp Phe Pro Phe Ile Val Ser Ile Ser Arg Asn Gly Gly Pro  
35 40 45

Trp Cys Gly Gly Ser Leu Leu Asn Ala Asn Thr Val Leu Thr Ala Ala  
50 55 60

His Cys Val Ser Gly Tyr Ala Gln Ser Gly Phe Gln Ile Arg Ala Gly  
65 70 75 80

Ser Leu Ser Arg Thr Ser Gly Gly Ile Thr Ser Ser Leu Ser Ser Val  
85 90 95

Arg Val His Pro Ser Tyr Ser Gly Asn Asn Asn Asp Leu Ala Ile Leu  
100 105 110

Lys Leu Ser Thr Ser Ile Pro Ser Gly Gly Asn Ile Gly Tyr Ala Arg  
115 120 125

Leu Ala Ala Ser Gly Ser Asp Pro Val Ala Gly Ser Ser Ala Thr Thr  
130 135 140

Ala Gly Trp Gly Ala Thr Ser Glu Gly Gly Ser Ser Thr Pro Val Asn  
145 150 155 160

Leu Leu Lys Val Thr Val Pro Ile Val Ser Arg Ala Thr Cys Arg Ala  
165 170 175

Gln Tyr Gly Thr Ser Ala Ile Thr Asn Gln Met Phe Cys Ala Gly Ala  
180 185 190

Ser Gly Gly Ser Ser Cys Met Gly Asp Ser Gly Gly Pro Ile Val Asp  
195 200 205

Ser Ser Asn Thr Leu Ile Gly Ile Val Ser Trp Gly Ser Gly Thr Cys  
210 215 220

Ser Thr Ser Thr Pro Gly Val Tyr Ala Ser Val Gly Ala Leu Arg Ser  
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Phe Ile Asp Thr Tyr Ala  
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<400> 8  
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<400> 9  
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 <212> DNA  
 <213> *Fusarium oxysporum*

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<210> 13  
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 <212> DNA  
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<400> 13  
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<210> 14  
 <211> 56  
 <212> DNA  
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<400> 14



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<211> 24

<212> DNA

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<212> DNA

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tatctcagat gtcagagaac g 21

<210> 19

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<400> 20

gctctgaccc tgtcgctgga t 21

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<211> 229  
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<400> 24

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20 25 30

Asn Glu Trp Val Val Thr Ala Ala His Cys Gly Val Thr Thr Ser Asp  
35 40 45

Val Val Val Ala Gly Glu Phe Asp Gln Gly Ser Ser Ser Glu Lys Ile  
50 55 60

Gln Lys Leu Lys Ile Ala Lys Val Phe Lys Asn Ser Lys Tyr Asn Ser  
65 70 75 80

Leu Thr Ile Asn Asn Asp Ile Thr Leu Leu Lys Leu Ser Thr Ala Ala  
85 90 95

Ser Phe Ser Gln Thr Val Ser Ala Val Cys Leu Pro Ser Ala Ser Asp  
100 105 110

Asp Phe Ala Ala Gly Thr Thr Cys Val Thr Thr Gly Trp Gly Leu Thr  
115 120 125

Arg Tyr Thr Asn Ala Asn Thr Pro Asp Arg Leu Gln Gln Ala Ser Leu  
130 135 140

Pro Leu Leu Ser Asn Thr Asn Cys Lys Lys Tyr Trp Gly Thr Lys Ile  
145 150 155 160

Lys Asp Ala Met Ile Cys Ala Gly Ala Ser Gly Val Ser Ser Cys Met  
165 170 175

Gly Asp Ser Gly Gly Pro Leu Val Cys Lys Lys Asn Gly Ala Trp Thr  
180 185 190

Leu Val Gly Ile Val Ser Trp Gly Ser Ser Thr Cys Ser Thr Ser Thr  
195 200 205

Pro Gly Val Tyr Ala Arg Val Thr Ala Leu Val Asn Trp Val Gln Gln  
210 215 220

Thr Leu Ala Ala Asn  
225